ART 1/2 MAINTENANCE NOTE 13 (for Electronics Technicians)
Engineering Division
W/OSO321:FLP

Meteorological Data Lightning Protection Device

General

1. This note informs electronics technicians that two different types of meteorological (met) data line protection devices are in use in the master control unit (MCU). Differences in the devices may cause a.c. noise on the met data line.

2. Effect on Other Instructions: None

Procedure

An MCG Electronics DLP-5.1-6V10 data line protection device was installed in the MCU during ART 1/2 Modification 1. The type specified and tested had the coax shield isolated from the MCU ground. This was done to prevent an a.c. ground loop between the office and dome. A ground loop can inject a.c. noise on the met data line. An a.c. ground loop normally only occurs at stations that use different sources of a.c. power for the dome and office.

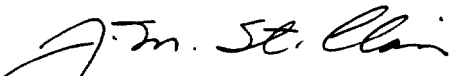
We learned that both isolated and non-isolated types were in stock at the NLSC. We discovered this when a station reported experiencing a.c. noise on the met data line after replacing their device. The noise caused a low QR value on the Micro-ART real time display. Troubleshooting showed that an a.c. ground loop existed between the office and dome. Installing the non-isolated type device received from stock had completed the ground loop.

Investigation revealed that the manufacturer built the protector in both styles under the same part number. We now stock the MCG Electronics model DLP-1716 in place of the DLP-5.1-6V1O. The DLP-1716 is isolated.

Check the type of device installed at your station. The isolated type has Teflon insulators on both chassis-mounted coax connectors. Stations with an a.c. ground loop must use an isolated type device. Do not bypass the device or disconnect the ground to correct the problem. Doing so disables the device and removes the transient protection from the met data line.

Until EHB-1 is updated, use the following information when ordering.

WSN	Description	NSN
J170-3A1A4	Signal Line Protector, MCG Electronics P/N DLP-1716	5920-01-271-2302



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